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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,716	12/18/2001	Ann Kerstin Birgitta Kjellqvist	ACO2844 US	2119

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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,716

Applicant(s)

KJELLQVIST ET AL.

Examiner

William P. Fletcher III

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

5 I. Claims 1 – 6, drawn to a process for coating a substrate, classified in class 427, subclass 407.1.

II. Claims 7 & 8, drawn to a coated article, classified in class 428, subclass 507.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions
10 are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by a materially different process: pre-forming the top radiation-curable coating film, curing the film by radiation, and bonding the cured film on a press-coated substrate.

15 3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Ms. Lainie E. Parker (reg. no. 36,123) on 12 February 2003, a provisional election was made *with* traverse to prosecute the invention of
20 Group I, claims 1 – 6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7 & 8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The disclosure is objected to because of the following informalities: (1) Parentheticals of the form “(both ex Croda),” or “(ex BASF),” beginning at p. 7, l. 8, are unfamiliar to the examiner. It is unclear whether these are intended to exclude (as in “all except Croda” or “all except BASF”) or include (as in “examples of which are from Croda” or “examples of which are from BASF”). (2) At p. 13, l. 4, the meaning of “5 cm² x 1-2 mm” is unclear. Does applicant mean “5 cm² x 1.2 mm” or “5 cm² x between 1 and 2 mm?”

Appropriate correction is required.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: PROCESS OF COATING A WOODEN OR CELLULOSIC SUBSTRATE WITH A PRESS COAT AND A TOP COAT.

Claim Objections

8. Claim 6 is objected to because of the following informalities: “based on the total weight, of the emulsion solids of filler and/or pigment” should, apparently, read “based on the total weight[,] of the emulsion solids, of filler and/or pigment.” Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5 10. **Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

11. Claim 1 recites “wood-like,” which renders the claim indefinite. It is unclear just what this term is meant to encompass. Since applicant has not explicitly defined this term, the
10 examiner has interpreted it according to its ordinary meaning. The ordinary meaning is inclusive of substrates that are not wooden or cellulosic at all, but have the outward appearance of wood, such as a polymeric sheet that had been printed with a so-called wood grain pattern. Consequently, it is unclear whether one of ordinary skill in the art would be reasonably apprised of the metes and bounds of the claimed subject matter.

15 ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the
25 claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1 – 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheets (US 5,059,264).

5 15. Sheets teaches a method in which a press coating is applied to a wooden substrate, such as hardboard or waferboard [abstract and c. 1, ll. 1 – 48]. The press coating is an aqueous dispersion comprising emulsion polymerized ethylenically unsaturated monomers, filler, and/or pigment [c. 3, ll. 3 – 37; c. 4, ll. 54 – 64; and c. 5, ll. 3 – 21]. Heat and pressure is applied to the press coating-coated substrate to cure the press coating and give a smooth surface [c. 5, ll. 22 –
10 40 and c. 1, ll. 61 – 65]. Sheets does not explicitly state, in the body of the reference, that a top coat is applied after curing of the press coat, said top coat being subsequently cured; or that a primer coat is applied and cured prior to application of the top coat. Sheets does teach that “Prefinished hardboard is made by consolidating lignocellulosic fibers under pressure in a press followed by application of one or more primer coats or top coats” [c. 1, ll. 20 – 23]. Based on
15 this teaching, it would have been obvious to one of ordinary skill in the art to modify the process of Sheets so as to coat and cure, atop the cured press coat, one or more primer coats and top coats. One of ordinary skill in the art would have been motivated to do so by the teaching of Sheets that doing so is a conventional means of yielding a prefinished wooden substrate suitable for a given end-use.

20 16. The examiner notes that Sheets is silent with respect to the degree of compression of the wooden substrate. Curing of the press coat is performed at 400°F and 300-500psi [c. 5, l. 30]. These values fall within the temperature and pressure ranges disclosed by applicant at p. 5, ll. 4 –

9 of the spec. Since Sheets otherwise teaches all of applicant's claimed press coating steps, it is the examiner's position that, unless some critical limitation(s) is/are not recited, the curing step of Sheets does not substantially compress the substrate, as defined at p. 3, ll. 17 – 24 of the spec.

17. With respect to claim 3, Sheets is silent with respect to exactly what sort of production apparatus is utilized. Absent clear and convincing evidence or arguments to the contrary, it is the examiner's position that performing all of the coating steps in a single production line would have been obvious to one of ordinary skill in the art in order to achieve maximum automation and efficiency of the coating process.

18. With respect claim 6, while Sheets does express the amount of pigment and/or filler in terms of "pigment-volume-content (PVC)," and that the PVC is between about 30% and 65%, the reference is silent with respect to the amount based on the total weight of the emulsion solids [c. 5, ll. 18 – 21]. It is the examiner's position that, since Sheets teaches adjusting the amount of pigment and filler, and since the amounts of these components are well-known result-effective variables effecting the viscosity and color of the coating, it would have been obvious to one of ordinary skill in the art to optimize these result-effective variables by routine experimentation. See MPEP § 2144.05(II)(A) and (B).

19. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheets (US 5,059,264) as applied to claim 1 above, and further in view of Cooley (US 4,587,141).

20. The teaching of Sheets is detailed above. With respect to claim 4, Sheets does not teach that the trop coat is a radiation-curable top coat, cured by UV radiation. With respect to claim 5,

Sheets does not teach that, before the top coat is applied, the substrate is printed. The examiner has interpreted this limitation as being inclusive of both the pre- and post-press coated substrate.

21. With respect to claim 4, Cooley, like Sheets, teaches a wooden substrate that has been previously coated with a resin and overlay paper [c. 3, l. 45 – c. 6, l. 6]. According to Cooley, the overlay paper receives a top coat of UV-curable resin that is subsequently UV cured [c. 5, ll. 33 – 46]. The UV-cured resin coating protects the underlying substrate [c. 5, ll. 56 – 58]. It would have been obvious to one of ordinary skill in the art to modify the process of Sheets so as to coat, as the top coat, a UV-curable resins, as taught by Cooley. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully protecting the underlying substrate, as suggested by Cooley.

22. With respect to claim 5, Cooley teaches that the overlay paper may be printed with a decorative design to make the finished product suitable for use in structural applications [c. 4, ll. 16 – 50 and c. 1, ll. 1 – 10]. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Sheets so as to utilize, as the overlay paper, a paper printed with a design, as taught by Cooley. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully imparting decorative effects to the finished wooden product, suitable for structural applications, as taught by Cooley.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McClary (US 2,418,233) and Hsu (US 5,741,823) are representative of the state of the art. Blazey (US 6,231,931 B1) teaches the application of UV-curable coatings to wooden substrates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (703) 308-7956. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

10

William P. Fletcher III
Examiner
Art Unit 1762

WPS
July 15, 2003


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